

REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-3, 5-18 and 20-26 are presently pending in this application, Claim 16 having been withdrawn from further consideration by the Examiner, Claims 4 and 19 having been canceled, Claims 1, 9 and 15 having been amended and Claims 25 and 26 having been newly added by the present amendment.

In the outstanding Office Action, Claims 1-14 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite; Claims 1, 2, 9-13, 15 and 17 were rejected under 35 U.S.C. §102(b) as being anticipated by Inaba et al. (U.S. Patent 5,709,106); Claims 3 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inaba et al.; Claims 3, 8, 18 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inaba et al. in view of J. W. Pedlow et al. (U.S. Patent 2,739,829); Claims 14 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inaba et al. in view of Robert Heisler (U.S. Patent 2,738,992); and Claims 4-8, 19 and 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Inaba et al. in view of Chudy (U.S. Patent 5,884,678).

Claims 1, 9 and 15 have been amended and Claims 25 and 26 have been newly added herein. These amendments and additions in the claims are believed to find support in the specification, claims and/or drawings as originally filed, for example, the specification, page 20, line 22, to page 22, line 8, page 23, line 15, to page 24, line 28, page 27, lines 2-17, and page 30, line 21, to page 31, line 3, and no new matter is believed to be added thereby. With regard to the rejection under 35 U.S.C. §112, second paragraph, Claims 1 and 9 have been also amended to clarify the subject matter recited therein. Thus, the pending claims are believed to be in compliance with the requirements of the statute. If, however, the Examiner

disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the rejections based on the cited references, a brief review of Claim 1 as currently amended is believed to be helpful. Claim 1 is directed to a heat exchanger and recites: “a pair of headers extending in a vertical direction and spaced apart from each other, the headers including a receiver-fixed header; a plurality of refrigerant tubes arranged one above another in parallel at a spacing between the pair of headers and having opposite ends joined to the respective headers; a plurality of fins arranged between respective adjacent pairs of the refrigerant tubes; a liquid receiver fixed to the receiver-fixed header; and a receiver connecting block fixed to a peripheral wall of the receiver-fixed-header and having a plurality of channels communicating an interior portion of the receiver-fixed header with an interior portion of the liquid receiver therethrough, wherein the liquid receiver is fixed to the connecting block, the connecting block and the liquid receiver is provided with respective fixing portions having respective contact faces in intimate contact with each other, the fixing portions of the connecting block and the liquid receiver have outer peripheral surfaces which are cylindrical surfaces sharing a same outside diameter, the liquid receiver is fixed to the connecting block by at least one screw with the contact faces of the fixing portions in intimate contact with each other, a seal member is liquid-tightly provided around respective outer peripheral surfaces of the fixing portions of the connecting block and the liquid receiver so as to cover a boundary between the contact faces of the fixing portion of the block and the fixing portion of the liquid receiver, the seal member is tubular and has rubber elasticity, and the seal member has an inner shape smaller than contours of the outer peripheral surfaces of the fixing portions of the connecting block and the liquid receiver and is fitted as elastically deformed around the fixing portion of the block and the fixing portion of the liquid receiver

in intimate contact with the outer peripheral surfaces of the fixing portions by elastic force of the seal member.”

It is respectfully submitted that Inaba et al. does not teach or suggest “a seal member is liquid-tightly provided around respective outer peripheral surfaces of the fixing portions of the connecting block and the liquid receiver so as to cover a boundary between the contact faces of the fixing portion of the block and the fixing portion of the liquid receiver, the seal member is tubular and has rubber elasticity, and the seal member has an inner shape smaller than contours of the outer peripheral surfaces of the fixing portions of the block and the liquid receiver and is fitted as elastically deformed around the fixing portion of the connecting block and the fixing portion of the liquid receiver in intimate contact with the outer peripheral surfaces of the fixing portions by elastic force of the seal member,” where “the liquid receiver is fixed to the connecting block by at least one screw with the contact faces of the fixing portions in intimate contact with each other” as recited in amended Claim 1.

Mores specifically, Inaba et al. simply describes that a mounting block 36 is fixed to the lower end of a cylindrical case 35 of a liquid tank 24. As such, Inaba et al. does not disclose or suggest a tubular seal member which has rubber elasticity and is liquid-tightly provided around the outer peripheral surfaces of the connecting block and the liquid receiver in such a way that the boundary between the block and the liquid receiver are covered by the seal member, where the liquid receiver is fixed to the connecting block by one or more screw in intimate contact. Nor does Inaba et al. disclose or suggest that such a seal member have an inner shape smaller than the contours of the outer peripheral surfaces of the block and the liquid receiver and be fitted as elastically deformed around the block and the liquid receiver in intimate contact with their outer peripheral surfaces by its elastic force.

Chudy shows a connector device 20 which temporarily joins the necks of two containers for fluid transfer and is not believed to teach or suggest “a seal member is liquid-

tightly provided around respective outer peripheral surfaces of the fixing portions of the connecting block and the liquid receiver ..., and the seal member has an inner shape smaller than contours of the outer peripheral surfaces of the fixing portions of the block and the liquid receiver ...,” where “the liquid receiver is fixed to the connecting block by at least one screw with the contact faces of the fixing portions in intimate contact with each other” as recited in amended Claim 1.

J. W. Pedlow et al. and Robert Heisler are directed to a plastic pipe joint and a pipe coupling, respectively, and are not believed to teach or suggest that “a seal member is liquid-tightly provided around respective outer peripheral surfaces of the fixing portions of the connecting block and the liquid receiver so as to cover a boundary between the contact faces of the fixing portion of the block and the fixing portion of the liquid receiver, the seal member is tubular and has rubber elasticity, and the seal member has an inner shape smaller than contours of the outer peripheral surfaces of the fixing portions of the block and the liquid receiver and is fitted as elastically deformed around the fixing portion of the connecting block and the fixing portion of the liquid receiver in intimate contact with the outer peripheral surfaces of the fixing portions by elastic force of the seal member,” where “the liquid receiver is fixed to the connecting block by at least one screw with the contact faces of the fixing portions in intimate contact with each other” as recited in amended Claim 1.

Therefore, the structure recited in amended Claim 1 is believed to be distinguishable from Inaba et al., J. W. Pedlow et al., Robert Heisler and Chudy.

Because none of Inaba et al., J. W. Pedlow et al., Robert Heisler and Chudy discloses the seal member structure as recited in amended Claim 1, their teachings even combined are not believed to render the heat exchange of amended Claim 1 obvious.

Likewise, Claim 15 is directed to a refrigerant passage portion connecting structure for a refrigeration cycle and has been amended to recite: “two blocks each having a channel

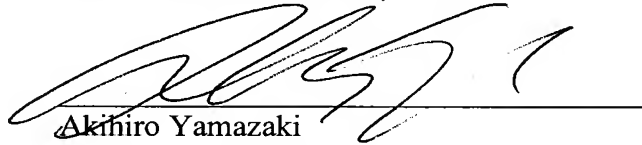
communicating with a refrigerant passage portion of a refrigeration cycle, the two blocks having respective fixing portions and respective contact faces each provided on a respective one of the fixing portions and to be positioned in intimate contact with each other, the channel having one end opened in the contact face, the fixing portions of the two blocks have outer peripheral surfaces which are cylindrical surfaces sharing a same outside diameter, the two blocks being fastened together with the contact faces of the fixing portions by at least one screw in intimate contact with each other and with the channels communicating with each other; and a seal member liquid-tightly provided around outer peripheral surfaces of the fixing portions of the two blocks so as to cover a boundary between the contact faces of the fixing portions, wherein the seal member is tubular and has rubber elasticity, and the seal member has an inner shape smaller than contours of the outer peripheral surfaces of the fixing portions of the two blocks and is fitted as elastically deformed around the fixing portions of the two blocks in intimate contact with the outer peripheral surfaces of the fixing portions by elastic force of the seal member.” Thus, Claim 15 is also believed to be distinguishable from Inaba et al., J. W. Pedlow et al., Robert Heisler and Chudy.

For the foregoing reasons, Claims 1 and 15 are believed to be allowable. Furthermore, since Claims 2, 3, 5-14, 17, 18 and 20-26 depend directly or indirectly from either Claim 1 or 15, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2, 3, 5-14, 17, 18 and 20-26 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Akihiro Yamazaki', is written over a horizontal line.

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